

What is claimed:

1 1. An enclosed carton for carrying a plurality of cylindrical containers,
2 each with a diameter, in at least two rows, with a bottom row, the carton having two
3 ends, at least one of which is an exiting end capable of permitting containers to exit
4 the carton one at a time, the carton comprising:

5 (a) a bottom panel, top panel, a foldably attached top end flap, and
6 foldably attached adjoining side panels;

7 (b) said exiting end having a bottom tear line generally parallel to said
8 bottom panel that extends partially across said exiting end, side tear lines extending
9 from said bottom tear line to form an end retainer in said exiting end adjacent each
10 side panel, with each side tear line extending into the adjacent side panel and
11 extending diagonally through said panel and extending into said top panel where said
12 side tear lines meet, with all of said tear lines being interconnected to form a dispenser
13 flap that when removed forms a dispenser opening, said bottom tear line being spaced
14 at a distance from said bottom panel at least sufficient to restrain the containers in the
15 bottom row from rolling out when the dispenser is open, said end retainers extending
16 into the exiting end at least a sufficient distance from each side panel and from said
17 bottom panel to prevent the containers in the row immediately above the bottom row
18 from rolling out when the dispenser is open while the bottom panel of the carton is in
19 a horizontal plane; and

20 (c) means to close any end that is a non-exiting end.

1 2. The carton of claim 1, in which said side tear lines meet to form a top
2 tear line with at least a portion of said top tear line being spaced from the fold line
3 between the top end flap and top panel that is significantly less than the diameter of
4 container to be contained in the carton.

1 3. The carton of claim 2, which has a dispenser opening flap in the top
2 panel that is foldably connected to the dispenser flap to facilitate opening the
3 dispenser flap.

1 4. The carton of claim 2, in which said top tear line in the top panel is
2 spaced from the fold line between the top end flap and top panel that is equal to
3 approximately 50% of the diameter of a container to be contained in the carton plus
4 approximately three millimeters.

1 5. The carton of claim 2, in which the distance from the top tear line in
2 the top panel and the fold line between the top end flap and the top panel is between
3 75 and 85% of the diameter of a container to be contained in the carton.

1 6. The carton of claim 1, in which said bottom tear line is located at a
2 distance from said bottom panel that is between one-third and two-thirds of the
3 diameter of a container in the bottom row.

1 7. The carton of claim 1, in which each end of the carton has four flaps
2 for closing said end of the carton, with a bottom end flap foldably attached to said
3 bottom panel, a top end flap foldably attached to said top panel, a side end flap
4 foldably attached to each adjoining side panel, said flaps being held together by glue.

1 8. The carton of claim 1, in which each side tear line that forms an end
2 retainer extends to the adjoining side panel as a curved tear line.

1 9. The carton of claim 6, in which each end of the carton has four flaps
2 for closing said end of the carton, with a bottom end flap foldably attached to said
3 bottom panel, a top end flap foldably attached to said top panel, a side end flap
4 foldably attached to each adjoining side panel, said flaps being held together by glue.

1 10. The carton of claim 7, in which each side tear line that forms an end
2 retainer extends to the adjoining side panel as a curved tear line.

1 11. The carton of claim 8, in which each end of the carton has four flaps
2 for closing said end of the carton, with a bottom end flap foldably attached to said
3 bottom panel, a top end flap foldably attached to said top panel, a side end flap
4 foldably attached to each adjoining side panel, said flaps being held together by glue.
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1 12. The carton of claim 11 in which said bottom end flap has an end, with
2 said bottom tear line being located in said side end flaps adjacent to said end of said
3 bottom end flaps.

1 13. The carton of claim 8, in which said bottom tear line is located at a
2 distance from said bottom panel that is between one-third and two-thirds of the
3 diameter of a container in the bottom row, and in which each end of the carton has
4 four flaps for closing said end of the carton, with a bottom end flap foldably attached
5 to said bottom panel, a top end flap foldably attached to said top panel, a side end flap
6 foldably attached to an adjoining side panel, said flaps being held together by glue.

1 14. The carton of claim 12, which is designed for carrying twelve
2 containers in three rows with four containers in each row.

1 15. The carton of claim 1, which has two exiting ends.

1 16. An enclosed carton for carrying a plurality of cylindrical containers,
2 each with a diameter, in at least two rows, with a bottom row, the carton having two
3 ends, at least one of which is an exiting end capable of permitting containers to exit
4 the carton one at a time, the carton comprising:

5 (a) a bottom panel, top panel, and foldably attached adjoining side
6 panels;

7 (b) said exiting end having a bottom end flap which is foldably
8 attached to said bottom panel, a top end flap foldably attached to said top panel, a side
9 end flap foldably attached to each side panel, and means for attaching said flaps
10 together to close the exiting end of the carton;

11 (c) said exiting end having a bottom fold line generally parallel to said
12 bottom panel that extends partially across said exiting end, with said bottom fold line
13 being spaced adjacent to said bottom end flap, side tear lines extending from said
14 bottom fold line to form an end retainer in said exiting end adjacent each side panel,
15 with each side tear line extending into the adjacent side panel and extending
16 diagonally through said side panel and extending into said top panel, where said side
17 tear lines meet, with all of said tear lines being interconnected to form a dispenser
18 flap, so that when said tear lines are torn a dispenser opening is formed for dispensing
19 the containers with said dispenser flap remaining attached to the carton by said
20 bottom fold line forming a basket for catching containers exiting the carton, said end
21 retainers extending into the exiting end at least a sufficient distance from each side
22 panel and from said bottom panel to prevent the containers in the row immediately
23 above the bottom row from rolling out when the dispenser is open while the bottom of
24 the carton is in a horizontal plane; and

25 (d) means to close any end that is a non-exiting end.

1 17. The carton of claim 16, in which said a bottom end flap has a height
2 that is significantly less than the diameter of a container to be contained in the bottom
3 row, with said bottom end flap having an end, with said bottom fold line being spaced
4 adjacent to said end of said bottom end flap.

1 18. The carton of claim 12, in which each side tear line that forms an end
2 retainer extends to the adjoining side panel as a curved tear line.

1 19. The carton of claim 16, in which said bottom fold line is located at a
2 distance from said bottom panel that is between one-third and two-thirds of the
3 diameter of a container to be contained in the bottom row.

1 20. The carton of claim 17, which has two exiting ends.

1 21. An enclosed carton for carrying a plurality of cylindrical containers,
2 each with a diameter, in at least two rows, with a bottom row, the carton having two
3 ends, at least one of which is an exiting end capable of permitting containers to exit
4 the carton one at a time, the carton comprising:

5 (a) a bottom panel, top panel, and foldably attached adjoining side
6 panels;

7 (b) said exiting end having a bottom end flap which is foldably
8 attached to said bottom panel, a top end flap foldably attached to said top panel, a side
9 end flap foldably attached to each side panel and means for attaching said flaps
10 together to close the exiting end of the carton;

11 (c) said exiting end having a bottom tear line generally parallel to said
12 bottom panel that extends partially across said side end flaps, with said bottom tear
13 line being spaced adjacent to said bottom end flap, side tear lines extending from said
14 bottom tear line to form an end retainer in said end adjacent each side panel, with
15 each side tear line extending into the adjacent side panel and extending diagonally
16 through said panel and extending into said top panel where said side tear lines meet,
17 with all of said tear lines being interconnected to form a dispenser flap that when
18 removed forms a dispenser opening, said end retainers extending into the exiting end
19 at least a sufficient distance from each side panel and from said bottom panel to
20 prevent the containers in the row immediately above the bottom row from rolling out
21 when the dispenser is open while the bottom panel of the carton is in a horizontal
22 plane; and

23 (d) means to close any end that is a non-exiting end.

1 22. The carton of claim 21, in which said bottom end flap has height that is
2 significantly less than the diameter of a container to be contained in the bottom row.

1 23. The carton of claim 1, which has a dispenser opening flap attached by
2 a fold line in the top panel to the dispenser flap to aid in opening said dispenser flap.

1 24. The carton of claim 1, which has a carrying handle.

1 25. The carton of claim 1, which is constructed from paperboard.

1 26. The carton of claim 21, in which each side tear line that forms an end
2 retainer extends to the adjoining side panel as a curved tear line.

1 27. An enclosed carton for carrying a plurality of cylindrical containers,
2 each with a diameter, in three rows with a top, middle and bottom row, the carton
3 having two ends; at least one of which is an exiting end capable of permitting
4 containers to exit the carton one at a time, the carton comprising:

5 (a) a bottom panel, top panel, and foldably attached adjoining side
6 panels;

7 (b) said exiting end having a bottom end flap which is foldably
8 attached to said bottom panel, a top end flap foldably attached to said top panel by a
9 fold line, a side end flap foldably attached to each side panel and means for attaching
10 said flaps together to close the exiting end of the carton;

11 (c) said exiting end having a bottom tear line generally parallel to said
12 bottom panel that extends partially across said side end flaps, with said bottom tear
13 line being spaced adjacent to said bottom end flap, side tear lines extending from said
14 bottom tear line to form an end retainer in said end adjacent each side panel, with
15 each side tear line then turning and extending into the adjacent side panel and
16 extending diagonally through said panel and extending into said top panel where said
17 side tear lines meet to form a top tear line with at least a portion of said top tear line
18 being spaced from the fold line between the top end flap and top panel that is
19 significantly less than the diameter of containers to be contained in the carton, with all
20 of said tear lines being interconnected to form a dispenser flap that when removed
21 forms a dispenser opening, said end retainers extending into the exiting end at least a
22 sufficient distance from each side panel and from said bottom panel to prevent the
23 containers in the middle row from rolling out when the dispenser is open while the
24 bottom panel of the carton is in a horizontal plane; and

25 (d) means to close any end that is a non-exiting end.

1 28. The carton of claim 27, in which said bottom end flap has height that is
2 significantly less than the diameter of a container to be contained in the bottom row.

1 29. The carton of claim 27, in which said means for attaching said flaps
2 together and said means to close the non-exiting end and attachment of flaps is glue.

1 30. The carton of claim 27, in which each side tear line that forms an end
2 retainer turns at an angle in the side end flap and extends into the adjacent side panel.

1 31. The carton of claim 27, which has a carrying handle.

1 32. The carton of claim 27, which has a dispenser opening flap in the top
2 panel that is foldably connected to the dispenser flap to facilitate opening the
3 dispenser flap.

1 33. The carton of claim 27, in which said top tear line in the top panel is
2 spaced from the fold line between the top end flaps and top panel that is equal to
3 approximately 50% of the diameter of a container to be contained in the carton plus
4 approximately three millimeters.

1 34. The carton of claim 27, in which the distance from the top tear line in
2 the top panel and the fold line between the top end flap and the top panel is between
3 75 and 85% of the diameter of a container to be contained in the carton.

1 35. The carton of claim 32, which has a dispenser opening flap in the top
2 panel that is foldably connected to the dispenser flap to facilitate opening the
3 dispenser flap.

1 36. The carton of claim 32, which has a carrying handle.

1 37. The carton of claim 27, in which each side tear line that forms an end
2 retainer turns at an angle in the side end flap and extends into the adjacent side panel.

1 38. The carton of claim 27, in which said bottom tear line is located at a
2 distance from said bottom panel that is between one third and two thirds of the
3 diameter of a container in the bottom row.

1 39. The carton of claim 27, in which only one end of the carton is an
2 exiting end.

1 40. The carton of claim 27 which is designed to carry cans with a diameter
2 of approximately 66 millimeters and in which the top tear line in the top panel is
3 spaced approximately 53 millimeters from the fold line between the top end flap and
4 the top panel.